



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI

GOVERNOR

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COMMISSIONER

Maine Army National Guard)	Departmental
Camp Keyes)	Findings of Fact and Order
Kennebec County)	Air Emission License
Augusta, Maine)	
A-802-71-D-A)	

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Maine Army National Guard (Camp Keyes), of Augusta, Maine was issued Air Emission License A-802-71-C-R, issued February 21, 2008.
2. Camp Keyes has requested an amendment to their air emissions license to include a new back-up generator to the facility's licensed equipment inventory list and to allow Camp Keyes to accommodate OP-4 emergencies.

- B. Camp Keyes is applying to include the operation of the following equipment to its air emissions license:

Back-up Diesel Generator

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Power Output (kW)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, Sulfur content</u>
DG #2	1.5	125	10.7	Diesel Fuel Oil, 500 ppm

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The expected emissions increases from the addition of the new back-up generator do not exceed the "Significant Emission Levels", therefore, this modification is determined to be a minor modification and has been processed as such.

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II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 1, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. New Back-up Diesel Generator

Camp Keyes has applied to add a new back-up generator to the facility's licensed equipment inventory list. The new generator, designated DG #2, has a power output capacity of 125 kW (210 HP) firing diesel fuel at a rate of 10.7 gallons per hour (gal/hr).

Camp Keyes' current Air Emission License (A-802-71-C-R) includes the operation of DG #1 and language that permits Camp Keyes to operate DG #1 in participation with ISO New England's Demand Response Program. ISO New England's Demand Response Program offers financial incentives to customers, such as Camp Keyes, to reduce electricity demand during peak periods.

In order for Camp Keyes to participate in the Demand Response Program, they need to start their generators and run them prior to, or in lieu of, loss of off-site power. Camp Keyes will only operate in this manner if there is a documented request from ISO New England under their emergency OP-4 procedures. Therefore, the Department has agreed to redefine the term "emergency" as it applies to Camp Keyes' DG #2 to include ISO New England OP-4 emergencies.

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DG #2 has been determined to be emergency generator. An "Emergency Generator" is defined as any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance and as it applies to Camp Keyes, ISO New England OP-4 emergencies. Examples include stationary engines used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary engines used to pump water in the case of fire or flood.

Additionally, Camp Keyes shall only be permitted to operate DG #2 in response to an OP-4 emergency for a total of no more than 50 hours each calendar year.

DG #2 was manufactured after July 11, 2005, therefore, DG #2 is subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*.

A summary of the BACT analysis for DG #2 (125 kW) is the following:

1. DG #2 shall fire only diesel fuel with a maximum sulfur content not to exceed 500 ppm.
2. Beginning October 1, 2010, Generator #1 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm.
3. DG #2 shall be limited to 100 hr/yr of operation for maintenance checks and readiness testing. DG #2 shall be limited to 500 hours per year of total operation based on a twelve-month rolling total.
4. Camp Keyes shall only be permitted to operate DG #2 in response to an OP-4 emergency for a total of no more than 50 hours each calendar year.
5. Camp Keyes shall maintain a written log of all generator operating hours. The log shall include the date, duration of operation, reason for operation and if operation is in response to an OP-4 emergency, Camp Keyes shall include the documentation of the request from ISO New England.
6. DG #2 shall be equipped with a non-resettable hour meter.
7. 06-096 CMR 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
8. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
9. Camp Keyes shall operate and maintain DG #2 in accordance with the manufacturer's written instructions. Camp Keyes shall not change settings that are not approved in writing by the manufacturer.
10. Visible emissions from the back-up generator shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

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Camp Keyes has applied to include a new above ground liquid storage tank to act as fuel storage for the new DG #2 back-up diesel generator. The new tank, designated DG #2 storage tank, has a capacity of 378 gallons of fuel. The new tank is not large enough to be subject to EPA NSPS 40 CFR 60 Subpart Kb. The new storage tank shall be subject to the same conditions and requirements of the other currently licensed storage tanks at the Camp Keyes facility.

C. Annual Emissions

- Annual facility emissions for the fuel burning equipment was calculated based on an annual fuel use restriction of 200,000 gal/yr #2 oil, 8,760 hr/yr operation of PH#1, 500 hr/yr operation of DG #1, 500 hr/yr operation of DG #2.
- Annual facility emissions totals also include VOC and HAP emissions from the spray booth operation.

Total Licensed Annual Emissions for the Facility

tons/year

(used to calculate the annual license fee)

Equipment	PM	PM₁₀	SO₂	NO_x	CO	VOC	Individual HAPs	Total HAPs
Oil Fired Boilers	1.7	1.7	7.1	7.0	0.5	0.03	-	-
PH#1	1.5	1.5	0.003	0.3	0.6	0.1	-	-
DG#1	0.2	0.2	0.07	4.2	1.1	0.1	-	-
DG#2	0.05	0.05	0.02	1.2	0.3	0.03	-	-
Spray Booth	-	-	-	-	-	2.5	-	-
Total TPY	3.45	3.45	7.2	12.7	2.5	2.8	1.0	5.0

III. AMBIENT AIR QUALITY ANALYSIS

According to *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 1, 2005), the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. Based on the total facility emissions, the Camp Keyes is below the emissions level required for modeling and monitoring.

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ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-802-71-D-A subject to the conditions found in Air Emission License A-802-71-C-R and in addition to the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

The following is a new condition to Air Emission License A-802-71-C-R:

(25) New Back-up Diesel Generator (DG#2)

- A. Camp Keyes shall only operate DG#2 for maintenance purposes, for situations arising from sudden and reasonably unforeseeable events beyond the control of the source and ISO New England OP-4 emergencies.
[06-096 CMR 115, BACT]
- B. DG #2 shall fire only diesel fuel with a maximum sulfur content not to exceed 500 ppm. [40 CFR 60.4207(a)]
- C. Beginning October 1, 2010, DG #2 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm. [40 CFR 60.4207(b)]
- D. DG #2 shall be limited to 100 hr/yr of operation for maintenance checks and readiness testing. DG #2 shall be limited to 500 hours per year of total operation. Both of these limits are based on a 12-month rolling total.
[40 CFR 60.4211(E) and 06-096 CMR 115, BACT]
- E. Camp Keyes shall not operate DG #2 for more than 50 hours per calendar year in response to an OP-4 emergency. [06-096 CMR 115, BACT]
- F. Camp Keyes shall install, maintain and operate a non-resettable hour meter on DG #2. [40 CFR 60.4209(a)]

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- G. Camp Keyes shall maintain a written log of all DG #2 operating hours. The log shall include the date, duration of operation, reason for operation and if operation is in response to an OP-4 emergency, Camp Keyes shall include the documentation of the request from ISO New England.
[06-096 CMR 115, BACT]

- H. Emissions shall not exceed the following:

Emission Unit		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
DG #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.2	0.2	0.1	6.6	1.4	0.1

[06-096 CMR 115, BPT, 06-096 CMR 103(2)(B)(1)(a)]

- I. DG #2 is subject to PM, CO, and NO_x + VOC emission requirements set forth in 40 CFR 60, Subpart IIII. Compliance with these emission requirements shall be demonstrated by certification from the manufacturer that this engine class meets the appropriate Tier standards. [40 CFR 60, Subpart IIII]
- J. Camp Keyes shall operate and maintain DG #2 in accordance with the manufacturer's written instructions. Camp Keyes shall not change settings that are not approved in writing by the manufacturer. [40 CFR 60.4211(a)]
- K. Visible emissions from the new back-up diesel generator DG #2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.
[06-096 CMR 101]

DONE AND DATED IN AUGUSTA, MAINE THIS 31st DAY OF March 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brooks for
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

This Amendment shall expire concurrently with Air Emission License A-802-71-C-R

Date of initial receipt of application: October 28, 2008

Date of application acceptance: October 30, 2008

Date filed with the Board of Environmental Protection:

This Order prepared by, Peter G. Carleton, Bureau of Air Quality

